REMARKS/ARGUMENTS

This response is intended to be a complete response to the office action of September 20, 2005 and the case is believed to be in condition for allowance. Accordingly, reconsideration is respectfully requested.

Claims 2-9, 12-17, 20-26 and 28-36 are pending in the application. Claims 2-9, 12-17, 20-26, and 28-35 were rejected in the office action.

35 USC 103

Claims 21, 22, 24, 25, 28, 29, 31, and 32 were rejected under 35 USC 103(a) as unpatentable over Matsumoto (U.S. Patent Number 6,522,731, hereinafter Matsumoto), Claim 26 was rejected under 35 USC 103(a) as unpatentable over Bae et al. (U.S. Patent No. 5,832,387, hereinafter Bae), Claim 23 was rejected under 35 USC 103(a) as unpatentable over Matsumoto in view of Rasmussen (U.S. Patent No. 4,490,788, hereinafter Rasmussen), Claims 8, 12, 13, 20, and 30 were rejected under 35 USC 103(a) as unpatentable over Gardner et al. (U.S. Patent Number 5,365,229, hereinafter Gardner) in view of Isaksson et al. (U.S. Patent Number 6,493,395, hereinafter Isaksson), Claims 14, 15, and 33-35 were rejected under 35 USC 103(a) over Gardner in view of Matsumoto, Claim 36 was rejected under 35 USC 103(a) as unpatentable over Bae in view of Van Kerchove (U.S. Patent No. 5,812,599, hereinafter Van Kerchove), Claims 2-7 and 9 were rejected under 35 USC 103(a) as unpatentable over Gardner in view of Isaksson in further view of Baird (U.S. Patent Number 6,469,636, hereinafter Baird), and Claims 16 and 17 were rejected under 35

USC 103(a) as unpatentable over Gardner in view of Matsumoto and further in view of Tzannes (U.S. Patent Number 6,798,735, hereinafter Tzannes). Applicants respectfully traverse these rejections.

The Examiner has failed to establish a *prima facie* case of obviousness. "To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations." MPEP 2143. The Examiner has failed to meet this burden.

Filed herewith are a 37 CFR 1.132 Declaration of Dr. Lloyd D. Clark and a 37 CFR 1.132 Declaration of Mr. Michael Montgomery. The facts set forth in Dr. Clark's declaration and Mr. Montgomery's declaration establish the following.

(1) The modification of Matsumoto for use in well-logging operations would render Matsumoto unsuitable for its intended purpose.

(2) The modification of Bae for use in well-logging operations would render Bae unsuitable for its intended purpose.

(3) The art taught away from the proposed combinations of ADSL references such as Matsumoto, Bae, Isaksson, Van Kerchove, and

Tzannes with well-logging references such as Rasmussen, Gardner, and Baird.

(4) The proposed modifications of Matsumoto and Bae would not have been expected by those skilled in the art to be successful.

(5) Experiments conducted by Dr. Clark and his colleagues at Schlumberger demonstrated that ADSL technology existing at the time of the invention would not work in the well-logging environment.

(6) The proposed combinations of ADSL references such as Matsumoto, Bae, Isaksson, Van Kerchove, and Tzannes with well-logging references such as Rasmussen, Gardner, and Baird would not have been expected by those skilled in the art to be successful.

(7) There was no motivation in the art, as of December 24, 1999, to combine well-logging references such as Rasmussen, Gardner, and Baird with ADSL references such as Matsumoto, Bae, Isaksson, Van Kerchove, and Tzannes to solve problems associated multi-carrier communication because the well-logging references were all single-carrier communications systems.

Therefore, the Examiner has filed to establish a *prima facie* case of obviousness. "If examination at the initial stage does not produce a prima facie case of unpatentability, then without more the applicant is entitled to grant of the patent." In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992), *quoted in* In re Lowry, 32 F.3d 1579, 32 USPQ2d 1031 (Fed. Cir. 1994). Thus, for the

reasons given above, Applicants respectfully request withdrawal of the rejection of Claims and their early allowance.

It is submitted that all the claims now in the application are allowable. Applicants respectfully request reconsideration of the application and claims and its early allowance. The Commissioner is hereby authorized to charge any fees associated with this response that may be required, or credit any overpayment, to Deposit Account 03-0330.

Respectfully submitted,

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